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# FOLLIES OF THE POSITIVE PHILOSOPHERS.

## ADDRESS

TO THE

## UNIVERSITY NORMAL SCHOOL

OF

NORTH CAROLINA,

DELIVERED AT

*CHAPEL HILL, JUNE 26, 1878,*

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# ADDRESS.

It is not my purpose to-day to discuss elaborately a particular subject, much less to attempt to make a rhetorical display. The line of thought intended to be offered can be better presented in a lively conversational style, than by earnest declamation. Intellectual instruction can be more successfully conveyed in such a mode than by that species of turgid declamation which, like the mock thunder of the stage, attempts to impose itself on the ignorant for eloquence.

Even real eloquence which arouses the passions of men and drives them forward under the enthusiasm of the moment, often fails to leave distinct and permanent intellectual images on the mind. Jefferson said that after Patrick Henry had concluded a speech, one could scarcely remember what he had said. I have myself listened to speeches, which wrought most strongly on my feelings, as well as those of the audience present, and yet in several instances, after they were finished, it was not possible to recall much of that which had produced the impression.

A fine band of music greatly enlivens the imagination and excites the feelings, but leaves no distinct intellectual images which can be recalled. As so large a part of the audience I am now about to address, consists of those engaged in conveying instruction to others, these suggestions appear to be appropriate.

Since the beginning of the earliest historic ages, two branches of science have been recognized and distinguished under the general terms of natural and moral philosophy. The first confines itself to the examination and investigation of material phenomena, while the second deals almost exclusively with human thoughts and feelings. In our day those who represent most distinctly the extremes of these two classes of thinkers, may be designated as Positive philosophers on the one hand and as Theologians on the other.

Instead of acting as allies, in the effort to advance human knowledge, they are often found in antagonism to each other. And yet in our day they often seem to carry on their warfare at so great a distance from each other, that they remind us of the method in which the Mexicans, in their civil revolutionary wars, do their fighting, viz: by standing on opposite ridges so far apart, that they are able to discharge all their ammunition without injuring any one on either side. In fact they accomplish the Hudibrastic feat of "living to fight another day," without taking the trouble to "run away." Perhaps a better illustration might present itself, in a remark attributed to Prince Bismarck, that war between Russia and England would be a fight between an elephant and a whale.

From necessity the theologians devote much of their time to the

examination and study of writers on moral and religious subjects. But many of them do this so exclusively that they attempt to decide the argument against the positive philosophers, by the authority of the Bible alone.

As an illustration of their method, I mention this anecdote. On a certain occasion I had a conversation with three Infidels, as to the truth of the Scriptural views, &c. After they had, in the course of the argument, been successively driven from other positions, one of them said, "if then it be true that there is one Supreme God, you cannot tell whether He is a man or a woman." To close the discussion, I answered, "That question is not material, for the authority and power of queen Victoria in England is just as great as was that of her predecessor, king William." An acquaintance of mine who had silently listened to the argument, afterwards, when we were alone together, said to me, "if you were as well posted on this subject as you are in law and politics, you would have put those men down at once. Why did you not tell him the Bible says '*He* will do such things'?" It did not occur to my friend, that if my antagonist had recognized the authority of the Bible, there would have been no controversy between us. By acquainting themselves better than they sometimes do with the arguments of the Scientists, the Theologians would often meet their objections more successfully, as a harpoon may be so skillfully directed as to reach the monarch of the briny deep.

To-day I intend chiefly to occupy your time with considering the views of their antagonists, the so-called positive philosophers. Many of them are prone to ignore the great truths of moral science, though they are just as evidently real as are the material existences which our senses observe.

They, because they cannot ascertain the geometrical form of honesty, or measure the specific gravity of anger or love, as compared with hydrogen gas, do not appear to recognize the existence of such qualities.

As the views of this class of thinkers are exercising a dangerous and mischievous influence on the minds of men, I propose to call your attention more especially to them. When a man exhibits high intellectual power, in connection with certain subjects, there is a tendency in the human mind to adopt his views generally. There are few greater fallacies than this.

If on entering a village as a stranger I should enquire for some one to make a suit of clothes, a person might say to me, "Just across the street you will find the best blacksmith in the country; he began the trade at sixteen, and has closely pursued it for thirty years, and has no superior." Ludicrous as would be the assumption, that because a man was a good blacksmith he ought, for that reason, to be able to make a suit of clothes or build a house, yet a similar mistake is often made with respect to the opinions of men of great eminence in some branch of science. In fact, their opinions are usually worth less, outside of the line of their immediate studies, than are those of well informed persons, who have taken a general view of human knowledge.

I propose to make this evident by references to the opinions of certain gentlemen eminent in philosophic science.

Prof. John Tyndall is justly entitled to occupy the highest rank among the great scientists of the day. His book on heat is a wonderful production. You have all doubtless heard of his prayer test, as it is called. Some years since he, with a view to determining the value of prayer, commended a proposition to test the matter in this mode. It was proposed that Christians generally should offer prayers for the sick living in a certain ward or district of London. This system of praying was to be kept up for the term of five years, and then a comparison should be made of the general health of the district during this term with that which had existed for a like previous number of years. In this manner it was asserted that the question would be decided whether prayer was beneficial to mankind or not.

The moral elements which would seem to constitute a part of this proposition may be better presented by a case like this: A and B have each bet the sum of one thousand dollars on a horse race to come off next Sunday. The terms are what the sportsmen call, "play or pay;" that is, that each of the parties having put up his thousand dollars, it is agreed that if either of them fails to make his appearance his adversary is to take the stakes. A, being very anxious to win, and feeling doubt as to the result, determines to enlist if possible Providence on his side through an earnest prayer. While reflecting on the subject this train of thought occurs to him and he soliloquises thus: "I am not sure that it will be politic for me to pray that my horse may be enabled to win the race, for I do not know that God Almighty takes much interest in horse racing, and especially in racing on Sunday. I will therefore use some strategy on this occasion. I will pray to Him to convert my adversary B and make a Christian of him. This will be a good thing in itself, and God Almighty will probably be willing to do this. And if B should be converted and become a pious Christian, then he will see the great wickedness of horse racing on Sunday, and he will not think of thus breaking the Sabbath. As he will not come up to the scratch with his horse, I will get his thousand dollars."

Does not this case present the same moral elements as that proposed by Prof. Tyndall? In effect Tyndall says, if we pray to God directly for a sign that will convince us, he will probably refuse to comply with our prayer, as he did the request of the unbelieving Jews, when they asked for a sign to convince them, but if we pray that he will perform a charitable work, then as he will not be able to see through our cunning strategy, he may, without being aware of it, furnish us the sign we seek. So palpable a fraud does this seem to be, that had such a suggestion been made in the time of Virgil, he would probably among his poetical pictures, have given us one of the man who had been hurled down into Tartarus by one of Jupiter's thunderbolts for attempting to deceive the gods by such a fraud.

This subject brings to mind the views of Prof. Tyndall, and some other scientists of his school, in relation to the subject of miracles. Not only is their truthfulness denied, but it is asserted that the Creator could not perform a miracle without deranging the system of the Universe. Though such a statement is a striking one, and calculated to

arrest attention, what consideration is it really entitled to? Would the occurrence of what is usually termed a miracle justify such a statement?

A stream is seen to be running along a ravine between two hills, and this stream, in accordance with the natural law of gravity, should forever continue its course along that ravine. But it in fact may be diverted from its former channel and carried along the side of the hill and finally discharged into a different valley. What has produced this seeming violation of the natural law of gravity? The will of man, acting, however, in accordance with other natural laws.

Again, a man stands by a spring or basin of water near his feet. The law of nature seems to prevent this water from rising out of the basin, and yet a portion of it is lifted to the lips of the man. What caused such a violation of the laws of nature? The will of man, acting through his muscles, caused a portion of this water, held in a cup, to be thus elevated.

Now let us apply the principles obviously illustrated by these cases to one class of miracles, which the scientist affirms will interfere with the natural laws established by the creative power. The country is suffering from drought and a congregation of Christians pray for rain. Let it be assumed that a heavy cloud, one hundred miles distant in the west, is being moved in such a direction, that it would pass to the northward of the place where the congregation are praying, should the creative power change the direction of this cloud, would such an act necessarily derange the system of the universe any more than did the act of the miller who directed the rivulet from its cours?

But, again, suppose that at the time the church congregation is at prayer, there were in fact no cloud existing within a thousand miles of the spot. We know that if the warm air near the surface of the earth, which is saturated with moisture, be elevated to a considerable height, the diminished pressure will allow it to be expanded, rarified and cooled, and thus its vapor of water will be condensed into a cloud. This is so obvious a fact, that it has been suggested that great artificial fires should be made to effect such a result. If the creative power should cause an upward movement in the lower strata of the air, that resulted in the production of a rainfall, would such an act tend to derange the system of the universe any more than did the lifting of a cup of water to the lips of the thirsty traveller? Will it be pretended that the power which created the system of nature and gave to it the laws which govern it, would not be able to perform such acts as may be done by the inhabitants of the earth?

Let us next consider a different class of miracles, such as the giving life to the dead, or creating a new being out of nothing. Is it to be considered extraordinary that a power which, for example, had formerly created millions of men, should to-day be able to create a single man? Would it not excite surprise if the statement were made that though the citizens of New York had erected one hundred thousand houses, yet they were not able to construct a single additional house, or that a man who had made one thousand shoes could not make another one? Upon what ground can it be assumed that the power

which created the material universe has become so exhausted that it could add nothing to that creation?

Even if we assume that only two human beings were created, with the capacity for indefinite multiplication, that act implies all the subsequent multiplication. The creation of a single complete oak tree, in fact does not seem to be as great a miracle as the creation of an acorn which is capable of being developed into an oak tree, bearing other acorns, capable of producing in succession an infinite number of other trees. If then the origin of the world, and its innumerable animal and vegetable inhabitants, be the result of an act of creative power, why might not that power be again manifested on a small scale? Why should it not be as easy for such a power to create an insect as to bring into existence a sun with its planetary system and countless organised beings?

With respect to the origin of the world around us, as it is manifested to our senses, two conflicting theories have been maintained. The first, and that most generally adopted by mankind, attributes the existence of the universe to the act of an intelligent, all-powerful creator. The second regards matter as capable in itself of producing all the facts observed by our senses, and denies the existence of any forces or powers outside of the material elements themselves. God represents the views of the first class and Nature those of the second.

In one of Prof. Tyndall's addresses, he says that he is not prepared to deny that every fact, movement, and even thought is the result and consequence of some condition of the sun in the past. If he does not speak of this as probable, yet he so refers to it as to imply that he regards it as one of the possibilities of scientific truth.

This statement, or figure at least, furnishes us as suitable an illustration of the two classes of views as can be had. Let it be supposed, for example, that long ago, from its expansion, due to its intense heat, a portion of the sun's matter filled the space of the earth's present orbit. In time, by cooling, this mass of matter may have been collected into our present globe of the earth, and by continued cooling became solidified, and has gone through the changes necessary to bring the earth to its present condition. Prof. Tyndall's view implies that while this matter formed a part of the sun's mass, such forces were impressed on it and such properties given to it, that all the organized beings existing were the direct result of these former conditions of the sun, and our every movement, pulsation and thought are the consequences of that past condition.

So great and so complicated does such a problem seem, that the mind does not readily grasp and comprehend it. If I throw a stone against the window, we readily see that a glass may be broken as a consequence of the movement of my muscles, and we easily perceive that the motion of the hands of a watch is the result of the condition of its mainspring. But to enable us to approach a comprehension of so vast a proposition as this of Prof. Tyndall, two or three steps may be taken by way of illustration.

Let us suppose that a scientific professor in the city of Washington for example, should say, "I have such a perfect knowledge of the exist-

ing condition of all the material and animal forces of the earth, that I will at a certain moment of time to-morrow, at a certain place, drop into the Potomac this piece of cork which I hold, and it shall be carried along down the stream, and though shaken by the movements of steamers, and tossed by the fins of fishes, it shall not lodge against the bank, but shall find its way into the Chesapeake Bay. It shall then cross the Bay, and be floated along in the ocean till it reaches the Gulf Stream. This stream will carry it into the Northern Sea, and it shall be returned in a course not far from the British Isles, and pass along through the Gulf of Guinea. It shall then be drifted westwardly, pass through the Straits of Magellan and across the Pacific Ocean. At a point which I can now designate, it will be found in the harbor of Canton, in China, and within the period of thirteen years, four months, three days, eleven hours, six minutes and two seconds. from the moment when I have dropped it into the water, it will be picked up by a boatman!" Such a statement as this, strange as it might seem, serves to give us but a faint idea of what the sun has done.

We will consider another case by way of illustration. A certain man declares that he has so much mechanical knowledge, and such skill as a manipulator, that he will take an hundred bushels of printer's types, throw them into a large vessel which will be worked by a steam engine, and that he will so regulate the movement of the vessel, that after it has been agitated for an hour, with the types in it, a small orifice will be opened in its side, through which at each revolution, a letter will fall out. He will so shake the vessel that when the letters fall successively, they shall be set up just as they fall, and when impressions are made with them, there will be an accurate edition of the works of Shakespeare in the order in which they have been originally written; secondly, Milton's works; thirdly, Byron's entire works, and fourthly, an accurate edition of the Bible! It is evident that the chances of producing such a result are more difficult than could be mathematically expressed. It is not probable that the youngest person here present, if he were to devote his life to the effort, would be able to give accurately a single sentence of ten words by such a process.

Yet even this does not suffice to give more than a faint idea of what the sun has done, for it has printed all the books in the world, produced all the vegetables and animals existing, and regulated every one of their movements and thoughts. Let us consider for a moment one of the small items of its task. To form each observed part of a single human body, countless atoms are required. Suppose, however, all this has been accomplished, and that the several members of a man's body existed and were thrown together with a capacity to adhere as they touched each other. Would it not be rare luck that all the teeth should happen to get together into two rows on the inside of the mouth, that his eye lashes and eye brows should form themselves systematically without any of them straggling over his nose? Would it not be still more strange that a hundred and forty thousand hairs should congregate on his head, that the patches of his skin should all get on the outside of his body, and the bones should, inside of it, arrange themselves in a suitable order?

The sun not only made and arranged all these for one man, but it had to provide in like manner for the innumerable millions that have existed, as well as the countless other organized animals and vegetables, and is now not only producing our movements and thoughts, but is in like manner producing those of every existing insect.

If I were to attempt to give you the highest, and most expanded conception of what an infinitely wise and powerful creator was capable of, could I do it better than to present this picture, and say that He was capable of giving such qualities toward impressing such forces on the sun, that for countless ages it would go on in the production of such phenomena as these?

Let us now consider for a moment which of these two theories is the most probably true? Remember that it is the human mind, constituted as it is, that is to decide this question. Mathematical axioms are held to be true, because they seem so, to our minds. Snow and charcoal are held to be of different colors, because they necessarily appear so to us. But it is easy for us to imagine the existence of a mind which would see these propositions to be the opposite of the truth. I repeat, however, that constituted as we are, our own minds must decide which of these theories is the true one. To determine this, let these cases be considered. On entering a room accompanied by a scientific professor, I observe several books, among which are the works of Shakespeare, Milton, Byron, and others. On looking over them, I remark to my companion that they appear to be so accurately printed that, evidently they were the work of skillful men. He replies "I do not think this at all probable, but would rather account for their accuracy in this mode. There is a man on the hill, who by machinery is manufacturing type rapidly. The letters fall from his machine singly as grains of wheat fall from the hopper of a mill, and they are picked up by boys who cannot read, just as they fall, and are thus set up by them, and impressions are made from them, and it seems to me that all these pages were thus printed." Which of these two theories appears the most probable?

Or let us take another case which perhaps resembles rather more the projectile operations attributed to the sun. I observe a thousand bottles filled with small shot, and on examination it is seen that there are in each of the bottles precisely ten thousand shot. I remark that these bottles must have been filled by very careful hands, to produce such absolute equality in the contents of each bottle. My companion replies "I think you are mistaken in your views, and that the bottles were filled in a very different manner. I believe that these thousand bottles with a view of airing them well were set out in an open lot of a couple of acres, at random, and promiscuously over the ground, and that they were filled in the manner I will describe. A man in the neighborhood is fond of shooting for exercise, and for that purpose he goes into a street near the lot, he there loads a musket with small shot and discharges it upward, but obliquely, in order that the shot may not fall on him. Though he does not see any of the bottles in the open field, for a stone wall prevents his so doing, yet he discharges his musket in such a direction upwards that one shot falls into the mouth of each

bottle. He with his hand seemingly very carelessly catches hold of one thousand shot each time, and thus one of them at each discharge falls into the upturned mouth of a bottle. After making one hundred discharges he rests for that day, and by continuing this operation for a hundred days, he fills all the bottles. No matter what may be the condition of the atmosphere, whether it be calm or windy, fair or rainy, he never fails to cause a shot to fall into each bottle. In fact one day when a thick hail was falling, he so discharged his musket that each shot either missed the hail or so glanced from it, as to fall as usual into the bottles, and thus they were all filled as you see them." Which of these two surmises would strike the human mind as the most probable?

Suggestions like these are calculated to assist us somewhat in deciding as to the relative merits of the two rival theories, by which we are to account for the existence of the elements constituting the material and organic world.

So overwhelming is the evidence in favor of their being the work of a powerful intelligence, that no arguments, however ingeniously constructed, will change the opinion of any considerable portion of the human race. A man who should fail to recognize such conclusions would not be regarded as fit to be entrusted with the ordinary transactions of business in the affairs of men.

I am walking with a scientist and our attention is attracted by a lofty monumental column. My companion says, "What a massive stone the capital of that column is; it must have required a great force to raise it." I reply, "Do you think it required a great force to raise it?" "Certainly," he answered, "that stone must weigh twenty tons and could only have been raised by a great force." I answer him, "Then that must have been the greatest force that ever was exerted, was it not?" "By no means," he answers, "that was nothing to the force which moves the earth on its axis." I answer him, "Then you say that the force which moves the earth is much greater; was it probably five times as great as this?" "You astonish me," he replies, "the force which moves the earth is immeasurably greater." At this moment the professor struck his foot against an object, stooped down and picked it up. On examining it he exclaimed, "What a beautiful watch this is. How could it have gotten here?" I say to him, "Perhaps that hog, which you see rooting the ground near us, made it." "What an absurd idea," exclaims the professor, "why this is such a perfect piece of mechanicism that it must have been made by a most ingenious man." "Then," I answer, "I would like to find that man, for I wish for a horse very much, and as he is so ingenious he would doubtless make one for me." "How laughable the idea," exclaims my companion, "do you really suppose that man could make a horse?" "Oh, Sir, I beg your pardon for my mistake, for a horse is much larger than the watch, but he could make a canary bird for my little sister, perhaps." "Make a canary bird indeed," exclaims the professor, "why he could not make one of its feathers. And now, sir, I am sorry to be obliged to change my mind about you. As I told you this morning, I wished to engage you to superintend my business, but you must excuse my declining to employ you. In

the first place, you did not see at a glance that it must have required force to raise that stone to the top of the monument, and then did not know that the force with which the earth rotates on its axis was immeasurably greater, and then your absurd proposition that the hog might have made the watch, and that a man who had made a watch might be able to make a horse, or at least a canary bird. All these absurdities satisfy me that you cannot have sense enough to manage any sort of business, and therefore you must look for employment from some one else."

To make the parallel complete however, the hog, in addition to his other qualities, ought to have been *dead*, so that like the inanimate matter of the sun he should have possessed the potentiality necessary to enable him to make the watch.

When these two hypothesis are thus compared, the human mind, constituted as it is, cannot fail to decide that the system around us is the work of an intelligent power, acting with a purpose well understood. Though an individual here and there may succeed in bringing his mind to a doubt on such a point, yet the general judgment of humanity will regard the proposition as being as palpably true as any axiom ever pointed out, viz: that the world around us is the work of an intelligent and an omnipotent Creator.

We are liable, however, to make a great mistake in the opposite direction. When we observe and consider systems of facts as laid before us, we often understand them so thoroughly in their bearings and seeming purposes, that we imagine we could have anticipated what we so clearly perceive. And like the Spanish philosopher, we are sometimes tempted to think that we could, if consulted in advance, greatly have improved the system ourselves. In fact, we thus are prone to exaggerate our capacity to foresee and provide. To make this manifest I will present an allegorical picture calculated to illustrate the truth of this proposition.

Let it be assumed that all the animals and plants now existing on the earth were in being as we see them, but unchanged by man, and that man had not been called into existence. Then in addition to this, assume that a mind existed with all the faculties and knowledge that the most scientific professor has, except that this mind had no knowledge whatever of man or his works. The mind is informed that a new animal is to be created, which is to be much superior to any of those already created, and to be capable of exercising dominion over them all, and existing in all the climates of the earth. This mind is given to understand that the models of the new being are to be presented for its inspection, and that it is to be permitted to select the most suitable one for its future habitation.

Full of anxiety and hope, the mind awaits the presentation. It has placed before it such a form of man as the Apollo Belvidere might have been modeled from. What impression would this figure make on it? We will permit it to speak for itself.

"The figure before me is certainly wonderfully beautiful, but at the same time exceedingly tender in its appearance. This must be intended by its deficiencies, merely to prepare my mind for the perfect image

that is to follow it. When I look upon its parts they seem to constitute a failure in every respect. It has but two feet, and of course it stands much less firmly than the four-footed animals. When the bear and the monkey stand on two feet only they are far more easily thrown down than when they rest on all four of their feet. This new animal would be falling constantly while it was attempting to move about, or struggling with an adversary.

Again, when I examine its feet they are of the worst possible form and structure. They are entirely flat, with no capacity to hold on to a limb, as the bear, panther, or monkey can do. Its feet have even no claws to assist it in its struggle as those of the panther or tiger do, nor can it strike effectually, as the horse does, an adversary, with its hind foot. And then see how tender they are. Even in the warm climates of the tropics the briars and thorns, to say nothing of the reptiles, would give them innumerable wounds, and torture the animal. But how would they bear the ice and snow of the Arctic regions? They would be cut to pieces by the ice and frozen in the snow. Even if the animal is not to be provided with the tough feet of the polar bear, he should at least have been furnished with the hard round hoof of the horse, or that of the goat or deer.

When I look to the fore paws or hands as they are called, they are if possible, even worse than the feet. It is true they possess some power to grasp, but then they present such a failure in the way of claws, that they seem only intended to make one laugh at their absolute uselessness. This creature is not only utterly unprepared to struggle with the lions, tigers and bears, but even the wolves and foxes would chew up his tender paws.

An animal so deficient in feet and claws ought, to enable it to make any sort of defence, to have been furnished with the most tremendous mouth. It should have projected like that of the crocodile, been armed with the most formidable teeth, and possessed the powerful grasp of the lion's jaws. Why this mouth is an utter abortion. Even a racoon would enjoy eating that tender face. As the animal is not able to defend himself, he should at least have been furnished with such a muzzle as the ox and sheep possess, so that he might live on the grass and other tender herbs, until some of the strong animals might come along and devour him.

As I gaze on him, each feature seems worse than those already inspected. What upon earth is he to do with that tender hide? Even in the tropics where he might not suffer from cold, the insects would render his existence intolerable. What will become of him in those parts of Africa, where the horse with his tough hide and thick coat of hair is killed by certain flies? Why this new creature should at least have been provided with a long and elastic tail, to assist him in keeping off the flies. When these stinging insects alight on his back between his shoulders, his only chance will be to lie down on his back, and the insects are so numerous that they will keep him rolling all the while, with thorns and briars to enliven his movements.

But then his existence in the tropics will be happiness in comparison with his fate in the Arctic regions. There he would be frozen to death in half an hour. To enable him to exist in that climate he should have

been provided with the thick coat of the white bear or the heavy wool of the northern buffalo. This, however, would render his existence intolerable in the warm climates. Possibly the best thing that could have been done with such a creature would have been to cover him well with a thick coat of feathers, which he might, like the goose, shed in warm weather. Instead of this animal being fitted to live in all climates and dominate over all the other creatures, he ought rather to be designated as the animal intended to constitute a delicious food for most of the others. The tigers and lions of the tropics and the white bears and wolves of the arctic regions, will regard him as a most tender and delicate food.

But I will examine your specifications, and explanations of his capacities. You say that though his feet are tender yet he will make shoes for them, out of the hides of deer and cows, so that he will protect them even better than are the feet of other animals now existing. This statement is absolutely laughable. He catch a deer indeed! why he is slower of speed than any quadruped whatever, except the terrapin. Even the cows can outrun him, and if he did succeed in overtaking a bull, or even a cow, he would soon wish himself somewhere else. But suppose that even by some good luck, he could find a dead cow, what could he do with its hide? The nails on what you term his hands, would make no impression on that tough hide, nor could he ever tear it with such a mouth as he has. Were he provided with the teeth of the ground hog he might possibly succeed in tearing off some strips of the hide, but then he would have no means of fastening them together, so as to make a protection for those feet of his.

Then I see that you state that he will provide a covering for his body by planting and cultivating such things as cotton, hemp and flax, and making clothing of them in some mysterious manner, and also that he will provide himself with better food than the cattle, and even the lions and wolves can obtain. To effect this, you state that he will clear off the trees and break up and soften the ground, and by the end of the year he will have food and clothing. Of all your absurdities, this is the most preposterous. How will he remove a tree? Even the bear with his strong teeth is only able to tear off the bark, but has never succeeded in cutting through the body of a single tree, much less in clearing large spaces of land. If the forest were even removed, how can he break up the ground? Had he been furnished with a tough snout like the hog he might have made some progress in that direction, but his nose is the worst for rooting hard ground I have ever seen, while those weak claws and tender fingers would be torn by contact with the earth and gravel. Taking your animal as a whole, if your purpose was, by making the most complete abortion, to throw the whole proposition into ridicule, you are certainly entitled to a premium. Everybody is obliged to see that your animal would starve to death or be frozen an hundred times before he could complete the first operation of cultivating land and obtaining a crop from it.

It must be admitted that you possess an imagination that is lively in presenting absurdities, but you abuse it grossly when you suggest that your new animals will penetrate the earth for thousands of feet and obtain metals out of it and make instruments harder than rock, with which

they will fight and subdue the other beasts. Indeed, you seem so absurdly silly that you cease to be amusing. An animal that cannot scratch a hole in the ground deep enough to hide himself, will split open the most solid rocks, penetrate them for miles, and obtain imaginary substances with which he will perform fabulous exploits! No extravagance and folly will surpass yours."

When we divest our minds for the moment of our acquired knowledge and place ourselves in the condition supposed, is it not evident that the picture presented above is similar to that which the human mind would adopt? Even with our present knowledge, does it not seem difficult, and even impossible, for man newly created, but without the aid of knowledge derived from experience, to exist on the earth? Assume that two or even an hundred adults were brought into the world as it was prior to man's existence, does it seem possible for them to live if they were destitute of all such knowledge as observation and experience teach? A party of men and women twenty years of age find themselves standing in a forest, with no knowledge of the vegetable and animal world except what they see before their eyes. If they think of eating, they know not which of the innumerable things they see to take hold of or attempt to swallow. By sight or even taste, if they strive to eat, they could not distinguish nutritious vegetables from those that were injurious. Even if they were standing on the shore of the sea, they would not know that by wading into the shallow water oysters might be picked up and broken open and eaten raw, rather than the pebbles that might be lying along the shore. With no food provided and with no knowledge to enable them to seek it, and dangerous enemies around them, from the stinging insect to the formidable lion, could such beings have existed? Even if human infants had been created, their condition would be only the more helpless. There is no reason to suppose that bears or monkeys would have kept them alive, instead of eating them. Even if they had been so kept, their foster mothers could only have taught them such knowledge as these animals possess themselves. Such a supposition is too absurd to be thought of as a possibility. As the creation of a human infant would of itself be as much a miracle as that of the adult, nothing could be gained for any class of scientists by the substitution of this view.

As to the Darwinian theory, but for the fact that some few persons of scientific reputation have spoken favorably of it, it is not plausible enough to justify attack. It is said they find a stumbling block in their failure to discover the missing link between the man and the monkey. As, however, the animal constituting this link was much more recent in its existence than the previous ones which are found, the remains of such an animal ought to be the most numerous. In fact, there should have been at least one hundred such links to bring the monkey up to the man, instead of a single one. We should have had a monkey with one human finger and an additional inch of brain, and so on in succession, each addition requiring a miracle or change from the usual order of nature. If a sow should produce one puppy in a litter of pigs, why should not this be regarded as being as clearly a miracle as if she had produced a whole brood of puppies or young ducks. As to the Darwinian theory, I have in a former publication stated the proposition, that the theory is

improable in itself, without a single fact to support it, and to which every known fact bearing any relation to the subject is directly hostile. The Darwinians, instead of being positive philosophers who rely only on observed facts, as they claim to do, are the most credulous of human beings. Gulliver's Travels and the stories in the Arabian Night's Entertainments seem probabilities, and mere matter of fact narratives, in comparison with the most plausible arguments and fancies of the Darwinian evolutionists.

Constituted as the human mind is, are we not obliged to decide that man when created must have been furnished with some knowledge of his own powers and of certain information as to the qualities and capacities of the things around him? Are we not forced by reason itself to adopt such a hypothesis as that given in the Mosaic account of man's creation?

While the inferior animals have been furnished with the instinctive knowledge necessary to enable them to exist, they seem incapable, in their successive generations, of making any considerable accumulations of knowledge. But man when first called into existence appears to know nothing, and yet is capable of indefinite increase of his knowledge and intellectual powers.

Having seen what he appears to have been when first called into existence, let us look at the other end of his progress. A large, eight paged New York Daily Newspaper, can be printed and delivered at the rate of fifty thousand copies in a single hour. Consider how much mental and mechanical action were called into play to produce this result. To prepare the band of white paper, miles in length itself, brought complicated mechanism into play. To produce the types, demanded the skill of the metallurgist and the artisan. Then how much brain and hand work were employed in perfecting the powerful and most complicated machinery, which, in its action, surpassed in accuracy and precision the skillful movements of the cunning human hand! And still it did not become weary, or stagger, or pause for breath while doing alone the work of several hundred men. Next think of the rail roads that were giving aid to the movement. To obtain the iron from the elements with which it was entangled, and by vast and intricate machinery to roll it into the bars that support the powerful and complicated locomotive engines, which aid the operation required immense thought and labor. The later provided telegraph wires, and electrical apparatus, seem to complete the mechanical part of the enterprise. Contemplation of the result fills us with wonder and pride. When we attempt to bring into view the vast and varied intellectual and mechanical action that has produced such a result, it is not strange that we should exaggerate the capacity of the human intellect.

This feeling rapidly subsides when we look backward and see how slow the progress has been. Does it not seem strange that Aristotle and Archimedes, Lucullus and Julius Cæsar did not discover the convenience of using chimneys in houses, and pantaloons in dress? The fact that the modern inhabitants of Greece and Italy so generally use them proves that their ancestors only lacked a knowledge of their utility and the modes of producing them.

Immense as has been human progress, it, nevertheless, seems to have been made slowly, and step by step. We readily see that a step may be taken from the point where we stand, but fail to perceive how we are to pass over ocean and mountain until we have made the circuit of the globe. We have made, however, an intellectual upward progress which seems unlimited, in strange contrast with the ficticious Darwinian theory of material evolution. While neither man nor any other animal has been able to add a new physical member or organ to his body, thought evolves thought, and we cannot see what is to be the limit of man's intellectual progress.

Before the forests and coal fields of the earth shall have been exhausted, it seems probable that there will be discovered some simple and cheap mode of decomposing that abundant element, water, so that we may be furnished with better fuel and lights than we now enjoy. Ere the iron mines are worked out, we shall, perhaps, with more facility than cast iron is now produced, obtain from the clays and certain abundant rocks the light and handsome metal, aluminum. It may serve a better purpose than iron does in the construction of ships and houses, and by amalgamations not yet known, may surpass steel itself, as the ancients, by mixtures of soft metals, obtained their razors and other cutting instruments.

The great positive philosopher, M. Comte, once said, that as the perfection of religion was the tracing of all to one Supreme God, so the end to be sought in material science is the being able to refer all its phenomena to one great cause, as, for example, the force of gravity. But certain facts have been observed that tend to incline the mind to believe that there is some strange influence or power in Nature that may suspend or counteract the force of gravity itself. May it not be possible that we shall in time trace not only magnetic attraction, but the force of gravity also, to that mysterious agent which we term electricity? When we observe its action on inanimate substances and all vegetable and animal existences, we are unable to set bounds to its influence and its power. And should we obtain such a control of its action as to use it to suspend at our will the power of the force of gravity, such a result does not strike our minds as being more extraordinary than a century ago would the suggestion of certain recent discoveries. To the philosophers of that day, the electric telegraph, the telephone and the phonograph would have seemed the propositions of the wildest imagination. That two persons situated on opposite sides of the earth should hold a conversation by the aid of lightning, and even hear each other's voices, as they can in the telephone, would have been regarded as more improbable than the story of Aladdin's Lamp.

Stranger even still, would have seemed the phonograph. That songs and conversations could be laid away for preservation, and at will, years afterwards, be reproduced and repeated in their very tones by material machinery, would have been regarded as certainly miraculous.

When the great progress made already is contemplated, our minds are so excited that we may anticipate an unlimited upward progress in a continued and eternal existence.

What conclusions shall we draw from such considerations as have been presented? That each professor of science is to be trusted in that line of study in which he has been specially engaged. But we must remember that the closer his application to a single branch, the less time is he able to give to other subjects. As the penetrative power of the telescope is increased by excluding light from its sides, so does close application to a single class of objects diminish the opportunities to acquire general knowledge.

It is sometimes, however, boastfully said, that science embraces all knowledge in its range. But what man has been able to comprehend it in all its extent? One may be a good chemist, and know little of astronomy; a first-rate mineralogist may be but slightly acquainted with mechanical forces. In proportion, however, as a man's acquaintance with many branches is extended, so will be his general knowledge and judgment. Sir Isaac Newton excelled in this respect. Had Lord Bacon passed his life in a laboratory, it is not probable that he would have made the great impression on the philosophy of the age in which he lived that he actually did produce. His being a great lawyer and statesman gave expansion, clearness and force to his views of science. In fact, it is the greatness of his mind that strikes us most, rather than the amount of his actual knowledge.

By learning two things, a man does much more than double his knowledge. Perhaps the most important of all the intellectual faculties is that of comparison, or conditionality as it was called by George Combe, the great phrenologist. By perceiving that a similar condition exists in many objects, we discover a general resemblance, or principle which extends through them all. As a lawyer, by examining precedents, seeks to find a general principle which runs through the cases, so the true scientist examines facts to be able to make generalization. Newton might in vain have observed the fall of the apple and the motions of the moon, if he had not possessed a faculty that enabled him to compare their conditions, and deduce the conclusions that they were acted upon by a certain general influence, which he designated as the law of gravity. The greater the number of facts which one can embrace in his view, the more likely will he be to discover the true principles involved, and to establish a sound system.

This proposition being conceded, it is important that every one should endeavor to know as much as possible, provided always, that he makes that knowledge his own. As the stomach should receive only as much food as it can digest, so the mind should take hold only of what it can understand, and make its own. By taking a wide range but embracing only the large ideas of many subjects, a man will vastly increase his general intellectual power.

On the other hand narrowness of view often produces overweening conceit, even among scientists, as they call themselves.

I once presented to a professor of eminence, a paper describing certain singular natural phenomena. He seemed much interested and surprised at the novelty of some of the facts, and said he would like to publish them if I would strike out some suggestions made as to the probable causes of the phenomena. I said that by references to a

probable cause I could make the facts better understood. He answered, that as I was not a professor, I could not be permitted to give an opinion as to the causes of the phenomena.

The late Dr. Charles T. Jackson, of Boston, eminent as he was, did not entertain so great a regard for the title of professor. Some few years before his death I said to him, "Do you prefer to be called Doctor or Professor?" He answered, "Doctor, by all means, for every pretender and mountebank is now calling himself Professor." Should the barbers and bootblacks call themselves professors, they may remind us of "Chess Congresses and Billiard Tournaments." If great names could elevate trifling things, "Cæsar and Washington" would not so frequently be found in the penitentiary.

So great has been the progress of modern science, and so vast have been the benefits it has conferred on the world, that its genuine devotees can well afford to laugh at the criticisms and the foibles of its weaker brethren. The tendency of modern positive science however, to exclude to a great extent such ideas as are not evident to the senses, is to be regretted. It thus often happens that palpable conclusions are liable to be ignored.

When I observe that a boy is walking in the snow with shoes on, it does not require a great strain of the reasoning faculties to enable me to decide, that in giving him shoes, the purpose of his father was, to protect his feet from the cold snow. In like manner we see that men and other animals exist on the earth, and that water and air, and vegetation of various kinds also are provided. When we see that men and beasts live by reason of these other elements, does it not seem a reasonable conclusion that in creating these things, it was the *purpose* of the creative power to provide them, in order that animal existence and comfort might be maintained!

Again, when we look into the moral world, we see that man posesses intelligence, selfishness, love of offspring, friendship, benevolence, love, and also a sense of right and wrong, or duty, and a conviction that he is responsible to some higher power for his conduct. Such elements as these constitute human society. Strip man of all sense of right or obligation, and organized society, such as we term civilization, will cease to exist. Go further and deprive him of friendship and love, and he may be as selfish, and far more cunning than the fox. Divest him of his philoprogenitiveness or love of offspring, and the race ceases to exist. When the creative power gave man all those qualities, which are necessary to constitute society, as we see it around us, can we doubt but that it was the purpose of that creative power to organize such a system?

The sense of obligation and accountability to a higher power, is just as essential to the existence of a well ordered human society, as the law of gravity is to the material world. If that law were destroyed, we not only would be unable to move on the face of the earth, but would even cease to retain our places on its surface. Its centrifugal motion would cause the water, the atmosphere and all unattached materials to be thrown off into space. Even the earth itself, ceasing to revolve about the sun, would move on in the line of a tangent to its

orbit, and pass away into darkness. In like manner, but for the great moral law of duty, human society would cease to exist on the earth.

This being evident to all who reflect deeply, it seems strange that any man of scientific attainments should seek to weaken in the human mind the sense of accountability to a supreme power. Erroneous views uncontradicted, often work an immense amount of mischief. An atheistical journal published and circulated fifteen years ago in Russia, is represented to have spread its *virus* most extensively in that great empire. It would seem as if the doctrine of the "Nihilists" were penetrating all classes of society. This sect, among its votaries, embraces professors in the high schools, nobles who have been impoverished by the loss of their serfs, army officers generally, fathers of families, and even *young girls*. These last are particularly fanatical, and most earnest in making proselytes, according to the official report of the Minister of Justice, and their combined efforts are producing a general dissolution of morals. Their aim is the destruction of "all States, all religions, all subordination, and the re-establishment of chaos, as the prelude to making everything over anew." The Minister of Justice in his report to the Emperor on the Nihilist trials writes, that "the government is powerless to arrest the current of these subversive doctrines, growing out of the dissolution of morals, and finally, of the complete absence of religious principles." The alarming spread of these doctrines is attributable to the general ignorace of the people, and the degraded condition of the Russian church, which from its ignorance and demoralization, can make no effectual resistance to doctrines that seem about to destroy society, as now existing in that immense Empire.

Such an example as this ought to awaken us to another great consideration. If the progress of science furnishes new arguments and weapons to the infidel, must not a wider and more extended knowledge in like manner aid the friends of morality and religion, without which society cannot be maintained? In the middle ages our English ancestors were able to defend themselves with bows and arrows, but now all nations are obliged to use the improved implements of modern warfare. As we cannot now defend ourselves without the use of rifles and cannon, so has it become the duty of the friends of morality and religion to acquaint themselves with the advanced views of scientific philosophy. A skillful general in war seeks to discover the positions of his adversary, in order that he may be able to strike him with effect. The physician, to relieve his patient of pain, endeavors to ascertain what organ in his system is diseased, before he applies a remedy. In like manner it is the duty of public teachers to acquaint themselves with the weapons and movements of their adversaries.

It is said, however, by way of apology for clergymen, that their whole time is required to be devoted to the study of theological writings. No greater mistake can be made than this. A man might occupy his whole life in reading about hor-es, without knowing as much of them as one could, who, after a few hours reading about them, should spend only a week in examining and using them so as to learn their qualities.

There has been much controversy as to whether it was most advantageous to man to acquire a classical or a scientific education. We might, with as much propriety, debate the point, whether a man's eyes or his ears were most advantageous in enabling him to acquire knowledge, or whether the right or left leg was most useful to a soldier in marching. A man may observe many things himself, but he vastly increases his stock of knowledge by reading, so as to add to his own the knowledge of others. A mere observer might learn some things well, while he who depended on the words of others might obtain a wide range of ideas, and yet know nothing thoroughly. To become really wise, men must study both things and the opinions of others also, whose observations and ideas will assist them. Society presents us with few weaker and more useless men than some who obtain the reputation of being learned because they can repeat much of what they have read.

It is clear that if clergymen wish to combat error successfully in their sermons, they must understand the theories and methods of their more dangerous adversaries. In addition to studying the views of men who have written learnedly on theological subjects, every clergyman should find time to read such books, for example, as Lyell's Principles of Geology, Humboldt's Cosmos, and other works of like character. Thus the scope of his intellect will be greatly enlarged, his knowledge become more precise and accurate, and he will improve his methods of presenting his ideas. Mere dialectic discourses seldom produce a permanent impression on an audience, nor do they tend greatly to extend knowledge.

To show the effect of different systems on human society, historical examples may be appealed to. How striking is the contrast between the great Roman Republic, with the religious feelings generally prevalent among its citizens, and the later Empire, after scepticism had become general. Compare the vigor of the early Mussulman movements, impelled as they were by religious fanaticism, with modern Turkey. To know what human society becomes without religion, we have but to turn our eyes to France, when, less than a century ago, the Goddess of Reason was placed on the throne.

Some act as though they feared that a comparison of material and moral systems might tend to overthrow religion, as if the Supreme Being had not sufficient knowledge and power to preserve consistency in the order of the universe. If this, in fact, were true, of course the enemies of religion would be willing to make the discovery and be ready to avail themselves of its advantages. But in fact, it is only a "little philosophy," as Bacon states it, that "inclineth men's minds to atheism," or, as Pope says, "a little learning is a dangerous thing."

A thorough examination of both the material and moral systems shows such a complete harmony that they stand together and constitute a system so vast and grand as to fill the human mind with satisfaction, wonder and sublimity of conception.

Before concluding, it may be proper that something should be said as to the best mode of conveying information. In the first place, a man must have distinct and clear ideas before he can convey such to

his auditors. Few mistakes are more frequently made by the ignorant, than the supposition that a man is deep because he is obscure. A person once said to me, after using certain vague expressions, "If I only had learning, as you have, I could express great ideas which I have in my head." In fact, it was the mistiness and obscurity of his ideas that rendered him unable to express them intelligibly. On matters connected with his farming operations, which he understood well, he expressed himself very clearly.

When it is stated that some orator took an exhaustive plunge into some subject so deep that his audience could not follow him, it should have merely been said that he performed an evolution like that of the frog, which, by leaping into a shallow spring and kicking up the mud, rendered it impossible that either he or the bottom should be seen. All intellectual ideas that a man has distinctly in his mind may be intelligibly expressed with ordinary powers of language.

It is otherwise, however, as to feelings and passions. It is often difficult for one to give an adequate idea of an emotion, because the sentiments and feelings vary much in different persons. The intensity of feeling varies so much in different individuals, that one person may have sentiments and emotions which he finds it impossible to express clearly and strongly in language to others.

In the second place, one must possess a fair command of language in order that he may easily make himself fully understood. Though persons differ in their powers in this respect, yet it is seldom that we find a man who is unable to convey clearly what he well understands. Much of the obscurity of speakers is due to a sort of vanity, which causes them to pile up great masses of words that, like an empty bladder when it is burst, give much noise without substance. By tricks of this kind, certain men occasionally lead the ignorant into the opinion that they are wise.

The fewer words that are needed and used to express the idea, the better for the hearer, just as it is easier to find the wheat after it has been thrashed than while it is mixed with the chaff. In the choice of words, too, to obtain clearness and force, it is well to use, when practicable, the Anglo-Saxon words, because as we in early life are accustomed to them, they convey at once the most striking images. On the other hand, when we wish to express an idea delicately, as a lady sometimes, to help the imagination of the beholder, partially veils her charms, phrases from the Latin or French may be used.

To impress the minds of auditors strongly, however, should be the main purpose of public speakers. Men of great ideas can afford to be simple in expression, as a perfect form can well challenge observation. The praise bestowed on Cæsar's style dates back to early times. Thiers, in discussing the style of Napoleon, so wonderfully striking and impressive, said that in his case "there was nothing between the word and the thought." Feeble and pretentious men, when they happen to have found a thought of some value envelope it in so many words in their effort to magnify it, and spread it so thin, that the auditors are wearied and disgusted, as a child handles and turns over his toy until he tires of it. It was said of Demosthenes, that he never went

back to the ground that he had utterly wasted as he passed over it in his rapid onward progress. The highest evidence of a speaker's oratorical power is, that after he has filled the minds of his audience with a great thought, before they have had time to fully master and measure it, and while they are still filled with wonder and surprise at its vastness, he hurries them on to another and another like it in its proportions. Sometimes, too, a great idea, merely glanced at, and a great feeling, dimly presented, lift the imaginations and the feelings of the audience to a pitch of excitement that carries them irresistibly forward. To enable a man to do this, and at the same time make a permanent impression, he must, however, by proper presentations to the intellect, have satisfied the judgment of his auditors. Unless this has been done, the effect is evasnescent, for unless intellectual images are connected with the feeling, it cannot have permanency and well retain its place in the mind.

Again, it must be understood that mere dialectic discourses, in which successions of abstract propositions are stated, are not only rather tiresome to the audiences, but they fail to make a lasting impression. It is often difficult to remember long, a proposition which seems intelligible at the moment while we are listening to it. Hence the importance of using illustrations as figures of speech, parables, &c. The four gospels of the New Testament, the best model I know of for the student, abound in such illustrations.

By using a proper figure we cannot only give greater distinctness to the idea, but we enable the hearer to retain it in his mind. In this manner an illiterate person will for years be able to reproduce the substance of an idea, because the figure used to illustrate it will retain the proposition in his memory. On the other hand, a man after having been harangued for three hours by a different kind of speaker, will tell his neighbors "Mr. ——— made a mighty long speech, no doubt it was mighty great, but he talked so much that I cannot remember what he said." After listening to such a speech the audience has merely a recollection of a disagreeable entertainment.

A contrary practice has, however, recently grown into use among certain political speakers. Seeing that in many instances a felicitous illustration or anecdote has produced a fine effect, they imagine that good speaking consists in amusing an audience by relating what are usually called anecdotes. These may be legitimately used for two purposes. In the first place a tired audience may be relieved by a laugh at a good story properly told. Secondly, these anecdotes, if judiciously applied to illustrate a proposition, or a hit on an adversary, give great effect to a speech. Flowers and music are appropriate adjuncts to a feast, but they of themselves do not satisfy hungry guests. In like manner a so-called speech, which is mainly made of jokes, produces no impression on the audience that might not be more strikingly caused by the antics and ludicrous falls of the clown Fox in Humpty Dumpty. Though the audience has been pleasantly entertained and will afterwards feel rather grateful to the speaker for the entertainment, yet no political impression has been made on it.

I recall a striking instance of this. In 1844 I attended a Whig barbecue at Knoxville, Tennessee The morning speeches had been made by the Hon. John Bell and myself, and the large audience had partaken of the barbecue. On our return to the stand a gentleman of high position spoke for nearly three hours in such a manner as to keep us in excellent humor and created almost incessant laughter, and we broke up in the best spirits. On the next morning Senator Spencer Jernagan spoke for two hours to a very attentive audience, without, however, even causing a smile in the vast assembly. After he concluded, a prominent Tennessee politician said to me, referring to Jernagan, "he is the man that we owe the revolution in East Tennessee to." I asked, enquiring if the gentleman who had spoken the evening before did not help also. He replied, "No; he is a fine man for a rally, but he never makes us a vote."

In 1860 I was present at a barbecue at which a young gentleman occupied most of the day. He possessed a good memory, had learned almost all of the anecdotes that were retailed during that campaign, and rehearsed them amusingly After he finished in the evening, an intelligent gentleman remarked to me, "this day has been completely lost to us." He was right in his view. Had a good band played pleasant airs the assembly would have been as highly entertained, and just as decided a political impression would have been made on it.

In 1872 I had an amusing illustration of the downward tendency produced by the fashion now so much in vogue. A young man whose opportunities to acquire an education had been limited, but who had commenced the study of the law, said to me, "General, I wish to learn how you great Senators used to do in the Senate. I wish particularly to hear about Mr. Webster; was he not a mighty man on an anecdote?" The question struck me as so ludicrous that I found it difficult to avoid laughing. A moment's reflection, however, enabled me to understand how he came to possess such an idea. A speech abounding in anecdotes had a few weeks previously been made in that region, and some of the papers had stated that this was the greatest speech that had been made since the times of Clay and Webster.

Genuine wit is a highly intellectual and important faculty. It has been well said that no one ever laughed loud at a thing really witty. The great English debater, Charles James Fox, was pronounced the wittiest man of his day. His wit was most strikingly shown when in the course of his powerful argument he so exposed the positions of his adversaries as to make them appear supremely ridiculous. Mr. Webster, in a lesser degree, sometimes exhibited this quality. Wholly unlike it, and most demoralizing to the public taste, is that counterfeit, a species of buffoonery, which consists in the retailing of stale anecdotes, after the fashion of Christy's minstrels or the circus clown, who delivers his jokes around at his successive performances.

Speakers should see that while they ought, to be effective, to avoid wordy dullness on the one hand, and mere entertaining frivolity on the other, they must, by thought, provide themselves with something to say, and then endeavor to say it in a manner that will make it clear and impressive. Especially should they, instead of degrading the

public tastes for the sake of temporary applause, strive to elevate the tone of intellectual thought and of moral feeling and sentiment.

While such applause as comes spontaneously and generally from the audience, gratifies a speaker, and adds to the force of his address, the counterfeit substitute sometimes exhibited has the contrary effect.

Loud stamping and yelling is usually the work of a few zealous partizans; it irritates opponents and disgusts fair minded persons, who otherwise might be convinced. When one expects to make converts, he must conciliate, rather than irritate opponents. In my canvass in 1840, learning that zealous friends had prepared a log cabin for parade at a meeting, I caused it to be kept concealed in the woods, lest its exhibition might irritate those whom I wished to win over. The most effective speeches I ever heard were those that were listened to in profound silence. An audience absorbed fully in the words and thoughts of the speaker, is unwilling to interrupt him even for a single moment, though at the close, they may sometimes give expression to their feelings by deep, general, prolonged applause.

Ladies and gentlemen, more than fifty years have passed by since I attended a commencement at this University. So numerous have been the great events in the world's history within that period, that we have not time even to glance at them. I regret to be compelled to say, that as respects our own State, the anticipations of that day have not been realized. For a few years prior to the late civil war, our State was making great progress in her material advances. But for that war, I think North Carolina would, when her condition as a whole was considered, rank with the foremost of the States.

Of her action in that war, it may truthfully be said that she did her full duty to herself and to humanity. Having delayed her movement as long as her safety and honor would permit her to do, she went into the contest with uncalculating devotion to the public cause, and I feel confident gave to it in material and men, more than any other State. When the struggle closed, two thirds of our property had been destroyed, and probably a majority of our best men had fallen in battle. It then seemed to me almost impossible that all of our people should escape starvation. Nevertheless there has in each successive year, been an upward progress, and our citizens generally are provided with the necessaries of life and some of its luxuries.

We often hear a desire expressed for the introduction of Northern capital to aid us. There are two reasons why we cannot secure much of this. The press of the dominant party there, to secure political capital at home, makes it a business to assail and misrepresent our people. When at the North, even within the last twelve months, I hear persons apparently intelligent, assert that Northern men are not protected in the South. The agents of Western emigrant societies, to secure emigration to their own section, also seek to make similar impressions.

A second obstacle to our obtaining capital from the North is due to this disposition in the human mind. As speculators will not buy in a falling market, so men seldom go to poor countries, but rather direct their steps to communities that are rising and prosperous. If the im-

pression existed that we were so prosperous that we did not need aid from abroad, capital would seek our territory to share our prosperity.

We must rely mainly on the efforts of our own people. Industry, directed by intelligence, and economy in expenditure, will, in time, enrich us, Our present greatest enemies are indolence and ignorance. Vigor in action, directed by intelligence in method and instruments, must be our main reliance. I once told the members of our Legislature, that they could do nothing perhaps better for the State than to send champions to fight these two old wrong-doers, ignorance and laziness.

If our people, as a whole, perform three-fourths as much work as they ought to do, and support themselves thereby, then if they would only do the other fourth we should make a profit of twenty-five per cent. per annum, and would thus soon become wealthy. If for a dozen years our citizens were to labor as earnestly and industriously as they did during the war, and live as economically, we should become the richest people upon earth. If this cannot be hoped for, at least let us strive to come as near to such a standard as possible.

The destruction of our system of education, and its only partial restoration, is, to my mind, the saddest result of the war. Its full restoration, with added efficiency and advantages, is the most urgent call of the present hour. You whom I now address can do much in this cause, and I trust the energies of the State will be vigorously and successfully brought to your aid.

An intelligent, industrious and enterprising body of citizens can so develope the great natural advantages of the State as to make North Carolina one of the most prosperous and noblest communities that has ever existed.

If, ladies and gentlemen, in the course of these suggestions, perhaps too much extended, I shall have brought to your minds thoughts that may be interesting in themselves, or calculated to be of advantage hereafter, our time will not have been spent in vain.